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Docket No.: BGI-154B  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
R. Rogers Yocum *et al.*

Application No.: 10/614,333

Confirmation No.: 5952

Filed: July 3, 2003

Art Unit: 1652

For: MICROORGANISMS AND PROCESSES  
FOR ENHANCED PRODUCTION OF  
PANTOTHENATE

Examiner: C. L. Fronda

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT (SDS)**

Dear Sir:

In accordance with 37 CFR 1.97, Applicants hereby make of record the following additional documents. A PTO Form SB/08 and a full copy of each of the documents required under 37 CFR 1.98(a)(2) accompany this statement.

Applicants have not submitted copies of each cited U.S. patent in accordance with 37 CFR 1.98(a)(2)(ii). Applicants submit herewith copies of foreign patents and non-patent references in accordance with 37 CFR 1.98(a)(2).

This statement is not to be interpreted as a representation that the cited documents are material, that an exhaustive search has been conducted, or that no other relevant information exists. Nor shall the citation of any document herein be construed *per se* as a representation that such document is prior art. Moreover, Applicants understand the Examiner will make an independent evaluation of the cited documents.

04/25/2007 TNGUYEN2 00000004 120080 10614333

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This Information Disclosure Statement is filed more than three months after the U.S. filing date, and after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Office Action or Notice of Allowance (37 CFR 1.97(c)).

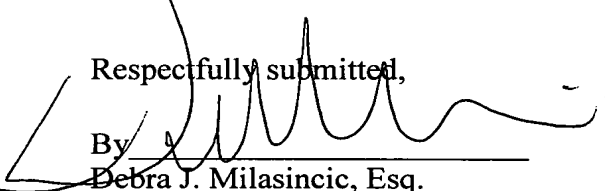
Our check in the amount of \$180.00 covering the fee set forth in 37 CFR 1.17(p) is enclosed. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 12-0080, under Order No. BGI-154B.

Dated: April 23, 2007

DJM/DLN/mch

The PTO did not receive the following  
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Respectfully submitted,

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PTO/SB/08A/B (09-06)

Approved for use through 03/31/2007. OMB 0651-0031

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|  |   |    |   | Application Number       | 10/614,333-Conf. #5952 |
|  |   |    |   | Filing Date              | July 3, 2003           |
|  |   |    |   | First Named Inventor     | R. Rogers YOCUM        |
|  |   |    |   | Art Unit                 | 1652                   |
|  |   |    |   | Examiner Name            | C. L. Fronda           |
| Sheet  | 1 | of | 2 | Attorney Docket Number   | BGI-154B               |

| U.S. PATENT DOCUMENTS |                          |  |                                |  |   |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|                       |                          | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
|                       | A1*                      | US-5,518,906                             | 05-21-1996                     | Hikichi et al.                                     |   |
|                       | A2*                      | US-5,529,908                             | 06-25-1996                     | Palva et al.                                       |   |
|                       | A3*                      | US-5,932,457                             | 08-03-1999                     | Moriya et al.                                      |   |
|                       | A4*                      | US-6,171,845-B1                          | 01-09-2001                     | Elischweski et al.                                 |   |
|                       | A5*                      | US-6,177,264                             | 01-23-2001                     | Eggeling et al.                                    |   |
|                       | A6*                      | US-6,184,006-B1                          | 02-06-2001                     | Rieping et al.                                     |   |
|                       | A7*                      | US-6,184,007-B1                          | 02-06-2001                     | Dusch et al.                                       |   |
|                       | A8*                      | US-6,689,592                             | 02-10-2004                     | Rieping et al.                                     |   |
|                       | A9*                      | US-6,787,334-B1                          | 09-07-2004                     | Elischweski, Frank et al.                          |   |

| FOREIGN PATENT DOCUMENTS |                          |   |                                   |  |   |                |
|--------------------------|--------------------------|---|-----------------------------------|--|---|----------------|
| Examiner<br>Initials*    | Cite<br>No. <sup>1</sup> | Foreign Patent Document   | Publication<br>Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns,<br>Lines,<br>Where Relevant<br>Passages or Relevant<br>Figures Appear | T <sup>6</sup> |
|                          |                          | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                                   |  |   |                |
|                          | B1                       | EP-0493060-A2   | 07-01-1992                        | Takeda Chemical Industries,<br>Ltd.                |   |                |
|                          | B2                       | EP-0590857-B1   | 04-06-1994                        | BASF Aktiengesellschaft                            |   |                |
|                          | B3                       | WO-97/10340-A1  | 03-20-1997                        | Takeda Chemical Industries,<br>Ltd.                |   |                |
|                          | B4                       | WO-98/18954-A1  | 05-07-1998                        | Monsanto Company                                   |   |                |
|                          | B5                       | EP-1006189-A2   | 06-07-2000                        | Degussa-Hüls<br>Aktiengesellschaft et al.          |   | Abstr.         |
|                          | B6                       | WO-01/83799-A1  | 11-08-2001                        | Degussa AG   |   |                |
|                          | B7                       | EP-1001027-B1   | 05-06-2004                        | Degussa AG   |   | Abstr.         |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an single asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

| NON PATENT LITERATURE DOCUMENTS |                          |   |                |
|---------------------------------|--------------------------|---|----------------|
| Examiner<br>Initials            | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|                                 | C1                       | Baigori, Mario et al., "Isolation and Characterization of <i>Bacillus subtilis</i> Mutants Blocked in the Synthesis of Pantothenic Acid," <i>Journal of Bacteriology</i> , Vol. 173(13):4240-4242 (1991)  |                |
|                                 | C2                       | Downs, Diana M., "Evidence for a New, Oxygen-Regulated Biosynthetic Pathway for the Pyrimidine Moiety of Thiamine in <i>Salmonella typhimurium</i> ," <i>Journal of Bacteriology</i> , Vol. 174(5):1515-1521 (1992)   |                |
|                                 | C3                       | Downs, Diana M. et al., "apbA, a New Genetic Locus Involved in Thiamine Biosynthesis in <i>Salmonella typhimurium</i> ," <i>Journal of Bacteriology</i> , Vol. 176(16):4858-4864 (1994)   |                |

|                       |                    |
|-----------------------|--------------------|
| Examiner<br>Signature | Date<br>Considered |
|-----------------------|--------------------|

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|   |   |    |   | Art Unit                 | 1652                   |
|   |   |    |   | Examiner Name            | C. L. Fronda           |
| Sheet   | 2 | of | 2 | Attorney Docket Number   | BGI-154B               |

|    |  |  |
|----|--|--|
| C4 | Elischewski, Frank et al., "Pantothenate production in <i>Escherichia coli</i> K12 by enhanced expression of the <i>panE</i> gene encoding ketopantoate reductase," <i>Journal of Biotechnology</i> , Vol. 75:135-146 (1999)   |  |
| C5 | Frodyma, Michael E. et al., "ApbA, the Ketopantoate Reductase Enzyme of <i>Salmonella typhimurium</i> Is Required for the Synthesis of Thiamine via the Alternative Pyrimidine Biosynthetic Pathway," <i>The Journal of Biological Chemistry</i> , Vol. 273(10):5572-5576 (1998) |  |
| C6 | Frodyma, Michael E. et al., "The panE Gene, Encoding Ketopantoate Reductase, Maps at 10 Minutes and Is Allelic to <i>apbA</i> in <i>Salmonella typhimurium</i> ," <i>Journal of Bacteriology</i> , Vol. 180(17):4757-4759 (1998)   |  |
| C7 | Merkel, William K. et al., "Characterization and sequence of the <i>Escherichia coli</i> <i>panBCD</i> gene cluster," <i>FEMS Microbiology Letters</i> , Vol. 143(2-3):247-252 (1996)  |  |
| C8 | Primerano, Donald A. et al., "Role of Acetohydroxy Acid Isomeroreductase in Biosynthesis of Pantothenic Acid in <i>Salmonella typhimurium</i> ," <i>Journal of Bacteriology</i> , Vol. 153(1):259-269 (1983)   |  |

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<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

|                       |  |                    |  |
|-----------------------|--|--------------------|--|
| Examiner<br>Signature |  | Date<br>Considered |  |
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